

BEFORE THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

8	In the Matter of:	)	
9	TECK COMINCO ALASKA, INC.	)	Docket No. CWA-10-2005-0165
10	Red Dog Mine,	)	COMPLIANCE ORDER BY
	Kotzebue, Alaska	)	CONSENT and REQUEST
11	NPDES Permit No. AK-003865-2	)	FOR INFORMATION
12	_____	)	

1. The following FINDINGS AND CONCLUSIONS are made, and COMPLIANCE ORDER BY CONSENT AND REQUEST FOR INFORMATION ("Order") issued, under the authority that Sections 308 and 309(a) of the Clean Water Act ("Act"), 33 U.S.C. §§ 1318 and 1319(a), vest in the Administrator of the United States Environmental Protection Agency ("EPA"). This authority has been delegated to the Regional Administrator, Region 10, and has been duly redelegated to the undersigned Director, Office of Compliance and Enforcement, Region 10.

**I. FINDINGS AND CONCLUSIONS**

**Regulatory Basis**

2. Section 301(a) of the Act, 33 U.S.C. § 1311(a), prohibits the discharge of pollutants by any person, except as authorized by an NPDES permit or other specified statutory sections. Section 402(a) of the Act, 33 U.S.C. § 1342(a), authorizes the Administrator of EPA to issue COMPLIANCE ORDER BY CONSENT AND REQUEST FOR INFORMATION,



1 NPDES permits for discharges of pollutants into waters of the United States upon such specific  
2 terms and conditions as the Administrator may prescribe.

3 3. Each violation of an NPDES permit, and each discharge of pollutants that is not  
4 authorized by an NPDES permit, constitutes a violation of Section 301(a) of the Act, 33 U.S.C.  
5 § 1311(a).

6 4. Teck Cominco Alaska, Incorporated ("Teck Cominco"), operates Red Dog Mine ("the  
7 Mine"), which is located on Red Dog Creek, 82 miles north of Kotzebue, Alaska, at latitude 68° 4'  
8 17" and longitude 162° 52' 5". Teck Cominco is a "person" within the meaning of Section 502(5) of  
9 the Act, 33 U.S.C. § 1362(5).

10 5. The Mine, which was under Teck Cominco's control at all times relevant to this  
11 action, discharges "pollutants" within the meaning of Section 502(6) of the Act, 33 U.S.C. §  
12 1362(6), from a "point source" (Outfall 001) within the meaning of Section 502(14) of the Act, 33  
13 U.S.C. § 1362(14), into Middle Fork Red Dog Creek, which is "navigable waters" within the  
14 meaning of Section 502(7) of the Act, 33 U.S.C. § 1362(7). The Mine's discharges constitute  
15 "discharges of pollutants" from a point source, within the meaning of Section 502(12) of the Act, 33  
16 U.S.C. § 1362(12).

17 6. Teck Cominco is authorized to discharge pollutants from the Mine under NPDES  
18 Permit No. AK-003865-2 ("Permit"). Under Section 401 of the Act, Alaska Department of  
19 Environmental Conservation ("ADEC") certified the Permit, and it became effective on August 28,  
20 1998, and was due to expire on August 28, 2003, but has been administratively extended under 40  
21 CFR § 122.6. Part I.A.1. of the Permit established an average monthly effluent limit of 170 mg/l,  
22 and a daily maximum effluent limit of 196 mg/l, for total dissolved solids ("TDS"), based on the  
23 Alaska water quality standard in effect at that time.

24 **Permit Exceedances**

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1           7.       At times during the months of September 1998, May - October 1999, May - October  
2   2000, May - October 2001, May - October 2002, May - August 2003, and May - September 2004,  
3   Teck Cominco violated the TDS effluent limits in Part I.A.1 of the Permit. Teck Cominco submitted  
4   information suggesting that it will not be in compliance with the Permit's TDS limits during the  
5   2005 discharge season.

6           8.       Teck Cominco's violations of the TDS limits in Part I.A.1 of the Permit constitute  
7   violations of Section 301(a) of the Act, 33 U.S.C. § 1311(a).

8   **Permit Modification**

9           9.       New TDS Limits. EPA issued a modified permit on July 17, 2003, effective  
10   August 22, 2003 (the "Modified Permit"). The Modified Permit contains new TDS limits and  
11   monitoring requirements based on revised Alaska water quality standards, which replace the TDS  
12   limits described in Paragraph 6 above. The new limits require Teck Cominco to limit the TDS load  
13   discharged from Outfall 001 such that in-stream TDS concentrations at various locations and times  
14   do not exceed specified levels. See Modified Permit Part I.A.8. For most of the discharge season,  
15   the maximum TDS concentration that the Modified Permit allows in Main Stem Red Dog Creek is  
16   1,500 mg/l. The Modified Permit further limits the maximum allowable TDS concentration to  
17   500 mg/l from the time the discharge commences in the spring (when the receiving water thaws)  
18   until Arctic grayling have finished spawning. The purpose of this more stringent restriction is to  
19   protect Arctic grayling during the spawning life stage.

20          10.      Appeal of New TDS Limit During Arctic Grayling Spawning. In an appeal of the  
21   permit modification, the Environmental Appeals Board ("EAB") vacated the 500 mg/l TDS limit  
22   during Arctic grayling spawning, and remanded to EPA Region 10 for further proceedings. EAB  
23   Appeal No. NPDES 03-09. The rationale for the ruling was that the EAB deemed the record  
24   insufficient to support the conclusion that the 500 mg/l TDS concentration adequately protected

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1 Arctic grayling spawning. Since the commencement of the appeal, additional laboratory data have  
 2 become available concerning the effect of TDS on Arctic grayling spawning. Furthermore, EPA and  
 3 Teck Cominco have coordinated extensively concerning additional testing that will take place in the  
 4 spring of 2005, and which will yield additional data later in the summer of 2005. EPA has deferred  
 5 acting on the remanded TDS permit limit until those new data are available. Because EPA  
 6 Region 10 has not yet acted on the remanded permit conditions as of the date of this Order, the  
 7 Permit's original more stringent TDS limits, as set forth in Paragraph 6, remain the effective effluent  
 8 limits during Arctic grayling spawning.

9 11. New Flow Limit. The Modified Permit includes an overall wastewater discharge  
 10 flow volume limit based on a mass balance equation. See Modified Permit Section I.A.8.j. The  
 11 purpose of the flow limit is to ensure compliance with the maximum in-stream TDS concentrations  
 12 specified in Part I.A.8 of the Modified Permit.

13 12. Additional Overall Cap on TDS Concentration. When EPA issued the Modified  
 14 Permit on July 17, 2003, Teck Cominco and EPA believed that the TDS concentration in the effluent  
 15 at Outfall 001, with the wastewater treatment system then in place, would not exceed 3,900 mg/l  
 16 over the life of the Modified Permit. In order to ensure that the mass balance equation included a  
 17 margin of safety, the Modified Permit required that Teck Cominco use 3,900 mg/l as the assumed  
 18 effluent TDS concentration in the mass balance equation, and also required that the effluent  
 19 concentration itself not exceed 3,900 mg/l. See Modified Permit Sections I.A.8.j, I.A.8.f.

## 20 New Information

21 13. Grayling Spawning Timing. Since issuing the Modified Permit, the Alaska  
 22 Department of Natural Resources, Office of Habitat, Management, and Permitting ("ADNR"), has  
 23 provided information indicating that Arctic grayling spawning does not begin as soon as Main Stem  
 24 Red Dog Creek begins to flow in the spring, but begins only when water temperatures there reach

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1 3°C. Therefore, from an ecological perspective, the critical time period for limiting the TDS  
 2 concentration in Main Stem Red Dog Creek to 500 mg/l begins only when the water temperatures  
 3 reach 3°C.

4 14. Discharge Volume Needs; Expected Exceedance of Maximum In-Stream TDS  
 5 Levels. Because of the manner in which TDS is introduced into the Mine's wastewater during the  
 6 wastewater treatment process, the TDS concentration in the receiving water is directly related to the  
 7 volumetric rate at which the Mine discharges wastewater. Because of unusually high snow  
 8 accumulations during the past winter, and the high water level in the Mine's tailings impoundment,  
 9 dam safety concerns may force the Mine to discharge wastewater at a volumetric rates that cause  
 10 exceedances of the applicable TDS permit limits.

11 15. Expected Exceedance of Overall Cap on TDS Concentrations; Effect on Flow  
 12 Volume Limit. Since the issuance of the Modified Permit, Teck Cominco has notified EPA that the  
 13 effluent concentration may in fact exceed 3,900 mg/l at Outfall 001 during the 2005 and 2006  
 14 discharge seasons. Teck Cominco initiated steps to reduce the TDS concentration in its effluent  
 15 prior to August 22, 2003, including design, bench testing, and construction of a new wastewater  
 16 treatment plant known as Water Treatment Plant 3. Those steps, however, will not reduce the  
 17 effluent TDS concentration significantly until the 2006 discharge season. For these reasons, the  
 18 following Order imposes an additional flow volume limit in the event TDS effluent concentrations  
 19 exceed 3,900 mg/l.

## 20 **II. ORDER**

21 16. Based upon the foregoing FINDINGS AND CONCLUSIONS, and pursuant to  
 22 Sections 308 and 309(a) of the Clean Water Act, 33 U.S.C. §§ 1318 and 1319(a), it is hereby  
 23 ORDERED as follows:

### 24 **Mixing Zones and Monitoring Stations**

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1           17.    The "Main Stem Red Dog Creek mixing zone" begins at the confluence of North  
2 Fork Red Dog Creek and Middle Fork Red Dog Creek and continues downstream for 1,930 feet.  
3 "Station 10" is a water quality monitoring station located on the Main Stem Red Dog Creek a short  
4 distance upstream of the confluence with the Ikalukrok Creek. "Station 151" is a water quality  
5 monitoring station located at the downstream end of the mixing zone in the Main Stem of Red Dog  
6 Creek. "Station 160" is a water quality monitoring station on Ikalukrok Creek several miles below  
7 the confluence with the Main Stem Red Dog Creek, and approximately three miles below the  
8 confluence of Dudd Creek with Ikalukrok Creek.

9    **Schedule for Compliance**

10           18.    Teck Cominco shall achieve compliance with its NPDES permit limits for TDS by  
11 December 31, 2005.

12    **Interim TDS Limits**

13           19.    After the commencement of discharge per the terms of the Modified Permit, Teck  
14 Cominco shall limit the TDS discharged from Outfall 001 so as to maintain in-stream TDS  
15 concentrations at Station 151 to a maximum of 1,500 mg/l until the start of Arctic grayling  
16 spawning.

17           20.    Teck Cominco must consult with ADNR regarding the start of Arctic grayling  
18 spawning. This begins when water temperature reaches approximately 3°C as measured at Station  
19 10 and confirmed with field observations conducted by the ADNR. Beginning when either EPA or  
20 ADNR notifies Teck Cominco in writing that the conditions for Arctic grayling spawning have been  
21 met in Main Stem Red Dog Creek, Teck Cominco shall limit the TDS discharged from Outfall 001  
22 so as to maintain in-stream TDS concentrations at Station 151 to a maximum of 500 mg/L.

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1           21.     After either EPA or ADNR notifies Teck Cominco in writing that Arctic grayling  
2 have finished spawning as provided in the Modified Permit (Section I.A.8.d), Teck Cominco shall  
3 limit the TDS load discharged from Outfall 001 as described in the Modified Permit.

4     **Mass Balance Calculation and Effluent Flow Volume Limit**

5           22.     In addition to applying the mass balance equations and complying with the resulting  
6 effluent flow volume limit in Section I.A.8.j. of the Modified Permit, Teck Cominco shall also apply  
7 the same mass balance equations using an assumed TDS effluent concentration equal to 110% of the  
8 highest effluent TDS concentration observed to date, instead of 3,900 mg/l as specified in the  
9 Modified Permit, and shall comply with any more stringent flow volume limits resulting from those  
10 calculations.

11     **Monitoring**

12           23.     Teck Cominco shall comply with the monitoring requirements in the Part I.A.8 of the  
13 Modified Permit.

14                     **III. SANCTIONS AND ENFORCEMENT**

15           24.     Violation of, or failure to comply with, the provisions of this Order may subject Teck  
16 Cominco to: (1) civil penalties of up to \$32,500 per day of violation pursuant to Section 309(d) of  
17 the Act, 33 U.S.C. § 1319(d), and 40 C.F.R. Part 19; (2) administrative penalties of up to \$11,000  
18 per day for each violation, pursuant to Section 309(g) of the Act, 33 U.S.C. § 1319(g), and 40 C.F.R.  
19 Part 19; or (3) termination of the Permit under 40 C.F.R. § 122.64.

20           25.     Nothing in this Order shall be construed to relieve Teck Cominco of the requirements  
21 of its NPDES permit or of applicable requirements of federal, state, or local law. EPA reserves the  
22 right to take enforcement action as authorized by law for any violation of this Order, and for any  
23 future or past violation of the Permit or any other applicable legal requirements.

24                     **IV. GENERAL PROVISIONS**

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1           26.   Reevaluation of Order's Requirements. EPA and Teck Cominco each understand that  
2 information will become available during the performance of this Order that may justify reevaluation  
3 of some of its provisions. EPA and Teck Cominco intend to confer periodically to exchange any  
4 new information, and to discuss any amendment to the Order's various terms that may be justified.

5           27.   Force Majeure

6           (a) If any event occurs which causes delay and effectively precludes compliance with the  
7 terms of this Order, Teck Cominco shall promptly notify EPA orally and shall, within seven days of  
8 oral notification to EPA, notify EPA in writing of the anticipated length and cause of the delay, the  
9 measures taken and to be taken by Teck Cominco to prevent or minimize the delay, and the timetable  
10 by which Teck Cominco intends to implement these measures.

11           (b) If EPA determines, in its discretion, that the delay or anticipated delay of an obligation  
12 under this Order has been caused, or will be caused, by circumstances beyond the reasonable control  
13 and despite the due diligence of Teck Cominco, then the time for performance of the delayed  
14 obligation shall be excused or extended for a period equal to the delay resulting from such  
15 circumstances.

16           (c) Force Majeure shall not include increased costs of performance of the terms and  
17 conditions of the Order, changed economic circumstances, or reasonably foreseeable seasonal  
18 fluctuations in the weather conditions of the region.

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8 (b) Teck Cominco expressly reserves the right to claim that no harm has been or will be  
9 caused by the discharge described in this Order.

13           30.   Property Transfer. If Teck Cominco transfers, sells, or leases the Mine to another  
14 party prior to Teck Cominco's fulfillment of the provisions of this Order, Teck Cominco shall  
15 incorporate a copy of this Order into the documents of transfer or lease, and shall provide in those  
16 documents that the new owners or lessees shall take or lease subject to the provisions of this Order.

Michael A. Bussell  
Director, Office of Compliance and Enforcement  
U.S. Environmental Protection Agency, Region 10



1 AGREEED AND CONSENTED TO BY:

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3 Teck Cominco Alaska Incorporated

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By:

R. G. Scott  
General Manager

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Date:

May 7th, 2005

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I, R. G. SCOTT, hereby certify that I am the General Manager of Teck Cominco, and that I have the authority to enter into agreements on behalf of Teck Cominco, and to otherwise legally bind Teck Cominco. I hereby acknowledge that I have freely and voluntarily consented to and signed this Order on behalf of the Teck Cominco after obtaining advice of counsel.

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